

Applicant: Knopfle et al.
Serial No.: 10/759,458
Amendment Dated: June 9, 2006
Office Action Dated: February 24, 2006
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REMARKS

Claims

Claims 1-3, 6, and 8-14 are pending in the application with claims 1 and 10 being independent. Claims 1, 2, and 10 have been amended. Claims 4, 5, 7, and 15-18 have been canceled. Reconsideration is respectfully requested.

Extension of Time

A petition and corresponding fee for a one month extension of time accompany this Amendment under 37 CFR §1.116.

Interview

An interview was conducted on May 3, 2006 between Examiner Travis Reis, Examiner Diego Gutierrez, and Applicant's representative, Trent K. English. During the interview, Examiners Reis and Gutierrez and Mr. English discussed the scope of independent claim 1, dependent claims 4 and 5, and the prior art currently being applied in the Final Rejection to claims 1, 4, and 5, particularly U.S. Patent Nos. 2,981,005 to Moe and 3,230,638 to Hite. Amendments to independent claim 1 incorporating dependent claims 4 and 5 were suggested by Examiners Reis and Gutierrez to overcome the current rejections based on Moe and Hite. Claims 1 and 10 have been amended accordingly to reflect the suggested claim amendments. Therefore, it is believed that the application is now in condition for allowance.

Claim Rejections – 35 U.S.C. §103(a)

Claims 1-6 and 8-11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hite in view of Moe. Claims 12-14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hite and Moe, in further view of DiCarlo (U.S. Pat. No. 5,180,388). Claims 4-5 have been canceled. Applicant has amended independent claim 1 by incorporating limitations from dependent claims 4 and 5. Applicant respectfully traverses the rejection to dependent claims 4 and 5 as discussed in the interview conducted on May 3,

2006.

Independent claim 1, as amended, defines over the cited prior art or any combination thereof. Claim 1 recites a measuring device for bone screws having different shaft diameters. The measuring device includes a body having a surface and an edge with a face running essentially vertically to the surface at the edge. Multiple receiving grooves are defined in the surface for receiving the bone screws. Each of the receiving grooves has an open end in the face of the body at the edge of the body. A limit stop is associated with each receiving groove to cooperate with a received bone screw. Each limit stop includes two limiting elements that project upwardly from the surface. Spacing between the limiting elements defines a selectivity with respect to the shaft diameter of the bone screw which can be received in the associated receiving groove. Each limit stop also defines a channel between the two limiting elements that extends downwardly below the surface. The limit stops are arranged in the region of the face at the edge of the body to form part of the face.

Hite discloses a metal plate 10 having a surface with a measuring scale for measuring bone screws. A single receiving groove 12 is defined in the surface for receiving the bone screws to be measured. The single receiving groove 12 is spaced inwardly from each edge of the metal plate 10. As noted by the Examiner, Hite fails to disclose multiple receiving grooves of varying dimension for receiving bone screws having different shaft diameters, as required by claim 1. Hite only provides a single receiving groove 12, which can result in errors when used to measure bone screws having different shaft diameters. More specifically, as the transition from screw head to screw shaft varies, different bone screws will sit within the single receiving groove 12 differently such that two bone screws of similar lengths will receive very different measurements. When placing bone screws in human bone, precise depth measurement can be critical and the present invention overcomes such variation in measurements by providing multiple receiving grooves for varying shaft diameters. Furthermore, Hite does not include any limit stops, as required by independent claim 1.

Moe discloses a measuring device for measuring a bolt's diameter and length. The measuring device comprises a surface 10 with multiple length measuring scales to measure

the bolt's length and limit stops with openings 14-28 at each scale having a selectivity used to measure the bolt's diameter. The limit stops include two limiting elements 12 projecting upwardly from the surface 10 with a space therebetween to define the selectivity. Channels are also defined between the limiting elements 12 and each of the channels is disposed above the surface. The bolt rests in the associated channel when the bolt is being measured. As a result of the channel being disposed above the surface, when a shaft of the bolt is positioned in the channel, the surface cannot support the bolt at a flat orientation relative to the length measuring scale. Therefore, measurements taken with Moe's device have limited accuracy since the bolt is skewed relative to the length measuring scale during measurement. In addition, Moe does not disclose receiving grooves in the surface.

Applicant respectfully submits that there is no motivation, teaching, or suggestion to combine Moe with Hite to arrive at independent claim 1 as amended. To start, in order to modify Hite to add limit stops, Hite requires significant reconstruction. Furthermore, Hite already has an aperture 16 that is used to receive the heads of bone screws and limit their movement. The use of limit stops is a completely different mode of limiting movement of the heads of bone screws and would be redundant if added to Hite. Finally, since the single receiving groove 12 of Hite is completely spaced inwardly from the edges of the metal plate 10, even if Hite could be properly reconstructed, the limit stops would not be arranged in the region of a face at the edge of the plate to form part of the face, as required by amended claim 1. As a result, Applicant respectfully submits that claim 1 is in condition for allowance. In addition, Applicant respectfully submits that dependent claims 2, 3, 6, 8 and 9 are also placed in condition for allowance based on their own merits and their dependency to claim 1, and the failure of the references to suggest claim 1.

Applicant respectfully submits that independent claim 10 is also in condition for allowance for the reasons cited above with respect to independent claim 1. In addition, Applicant respectfully submits that dependent claims 11-14 are in condition for allowance based on their merits and their dependency to claim 10, and the failure of the references to suggest claim 10.

Applicant believes the application is now in condition for allowance, which allowance is respectfully solicited. Applicant believes that no additional fees are

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required, except for the fees included in the attached check, if any. In any event, however, the Commissioner is authorized to charge our Deposit Account No. 08-2789 for any additional fees or credit the account for any overpayment.

Respectfully submitted,
HOWARD & HOWARD ATTORNEYS, P.C.

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Date

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